Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
           DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s): L. Wackett, et al.
Serial No.: Not yet assigned   Filed: Even date herewith   Docket: 110.00230102
Express Mail No.: EL776903336US
                                                                    Sheet 1 of 7

1/7

Fig. 1

Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
            DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s) L. Wackett, et al.
Serial No.: Not yet assigned
Filed: Even date herewith   Docket: 110.00230102
Express Mail No.: EL776903336US
Sheet 2 of 7

2/7

Fig. 2

Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
             DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s): L. Wackett, et al.
Serial No.: Not yet assigned   Filed: Even date herewith   Docket: 110.00230102
Express Mail No.: EL776903336US   Sheet 3 of 7

3/7

EcoRI

Hind III
BamHI
EcoRI
Hind III
Bgl II

Bgl II

EcoRI

Bgl II

EcoRI
Hind III
BamHI
EcoRI
Hind III
Bgl II

BamHI

EcoRI

Fig. 3

Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
          DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s): L. Wackett, et al.
Serial No.: Not yet assigned   Filed: Even date herewith   Docket: 110.00230102
Express Mail No.: EL776903336US   Sheet 4 of 7

4/7

Fig. 4

$$Atrazine \xrightarrow{pMD4} Hydroxyatrazine \rightarrow \rightarrow \rightarrow CO_2 + NH_3$$

Fig. 5

Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
         DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s): L. Wackett, et al.
Serial No.: Not yet assigned
Express Mail No.: EL776903336US   Filed: Even date herewith   Docket: 110.00230102
                                                                      Sheet 5 of 7

5/7

𝓕𝓲𝓰. 6

```
   1   CTCGGGTAAC TTCTTGAGCG CGGCCACAGC AGCCTTGATC ATGAAGGCGA
  51   GCATGGTGAC CTTGACGCCG CTCTTTTCGT TCTCTTTGTT GAACTGCACG
 101   CGAAAGGCTT CCAGGTCGGT GATGTCCGCG TCGTCGTGGT TGGTGACGTG
 151   CGGGATGACC ACCCAGTTGC GGTGCAGGTT TTTCGATGGC ATAATATCTG

                                              atzA →
 201   CGTTGCGACG TGTAACACAC TATTGGAGAC ATATCATGCA AACGCTCAGC
 251   ATCCAGCACG GTACCCTCGT CACGATGGAT CAGTACCGCA GAGTCCTTGG
 301   GGATAGCTGG GTTCACGTGC AGGATGGACG GATCGTCGCG CTCGGAGTGC
 351   ACGCCGAGTC GGTGCCTCCG CCAGCGGATC GGGTGATCGA TGCACGCGGC
 401   AAGGTCGTGT TACCCGGTTT CATCAATGCC CACACCCATG TGAACCAGAT
 451   CCTCCTGCGC GGAGGGCCCT CGCACGGACG TCAATTCTAT GACTGGCTGT
 501   TCAACGTTGT GTATCCGGGA CAAAAGGCGA TGAGACCGGA GGACGTAGCG
 551   GTGGCGGTGA GGTTGTATTG TGCGGAAGCT GTGCGCAGCG GGATTACGAC
 601   GATCAACGAA AACGCCGATT CGGCCATCTA CCCAGGCAAC ATCGAGGCCG
 651   CGATGGCGGT CTATGGTGAG GTGGGTGTGA GGGTCGTCTA CGCCCGCATG
 701   TTCTTTGATC GGATGGACGG GCGCATTCAA GGGTATGTGG ACGCCTTGAA
 751   GGCTCGCTCT CCCCAAGTCG AACTGTGCTC GATCATGGAG GAAACGGCTG
 801   TGGCCAAAGA TCGGATCACA GCCCTGTCAG ATCAGTATCA TGGCACGGCA
 851   GGAGGTCGTA TATCAGTTTG GCCCGCTCCT GCCACTACCA CGGCGGTGAC
 901   AGTTGAAGGA ATGCGATGGG CACAAGCCTT CGCCCGTGAT CGGGCGGTAA
 951   TGTGGACGCT TCACATGGCG GAGAGCGATC ATGATGAGCG GATTCATGGG
1001   ATGAGTCCCG CCGAGTACAT GGAGTGTTAC GGACTCTTGG ATGAGCGTCT
1051   GCAGGTCGCG CATTGCGTGT ACTTTGACCG GAAGGATGTT CGGCTGCTGC
1101   ACCGCCACAA TGTGAAGGTC GCGTCGCAGG TTGTGAGCAA TGCCTACCTC
1151   GGCTCAGGGG TGGCCCCCGT GCCAGAGATG GTGGAGCGCG GCATGGCCGT
1201   GGGCATTGGA ACAGATAACG GAATAGTAA TGACTCCGCA AACATGATCG
1251   GAGACATGAA GTTTATGGCC CATATTCACC GCGCGGTGCA TCGGGATGCG
1301   GACGTGCTGA CCCCAGAGAA GATTCTTGAA ATGGCGACGA TCGATGGGGC
1351   GCGTTCGTTG GGAATGGACC ACGAGATTGG TTCCATCGAA ACCGGCAAGC
1401   GCGCGGACCT TATCCTGCTT GACCTGCGTC ACCTCAGACG ACTCTCACAT
1451   CATTTGGCGG CCACGATCGT GTTTCAGGCT TACGGCAATG AGGTGGACAC
1501   TGTCCTGATT GACGGAAACG TTGTGATGGA GAACCGCCGC TTGAGCTTTC
1551   TTCCCCCTGA ACGTGAGTTG GCGTTCCTTG AGGAAGCGCA GAGCCGCGCC
1601   ACAGCTATTT TGCAGCGGGC GAACATGGTG GCTAACCCAG CTTGGCGCAG
1651   CCTCTAGGAA ATGACGCCGT TGCTGCATCC GCCGCCCCTT GAGGAAATCG
1701   CTGCCATCTT GGCGCGGCTC GGATTGGGGG CGGACATGA CCTTGATGGA
1751   TACAGAATTG CCATGAATGC GGCACTTCCG TCCTTCGCTC GTGTGGAATC
1801   GTTGGTAGGT GAGGGTCGAC TGCGGGCGCC AGCTTCCCGA AGAGGTGAAA
1851   GGCCCGAG
```

Title: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE
           DEGRADATION OF TRIAZINE COMPOUNDS
Applicant(s): L Wackett, et al.
Serial No.: Not yet assigned   Filed: Even date herewith   Docket: 110.00230102
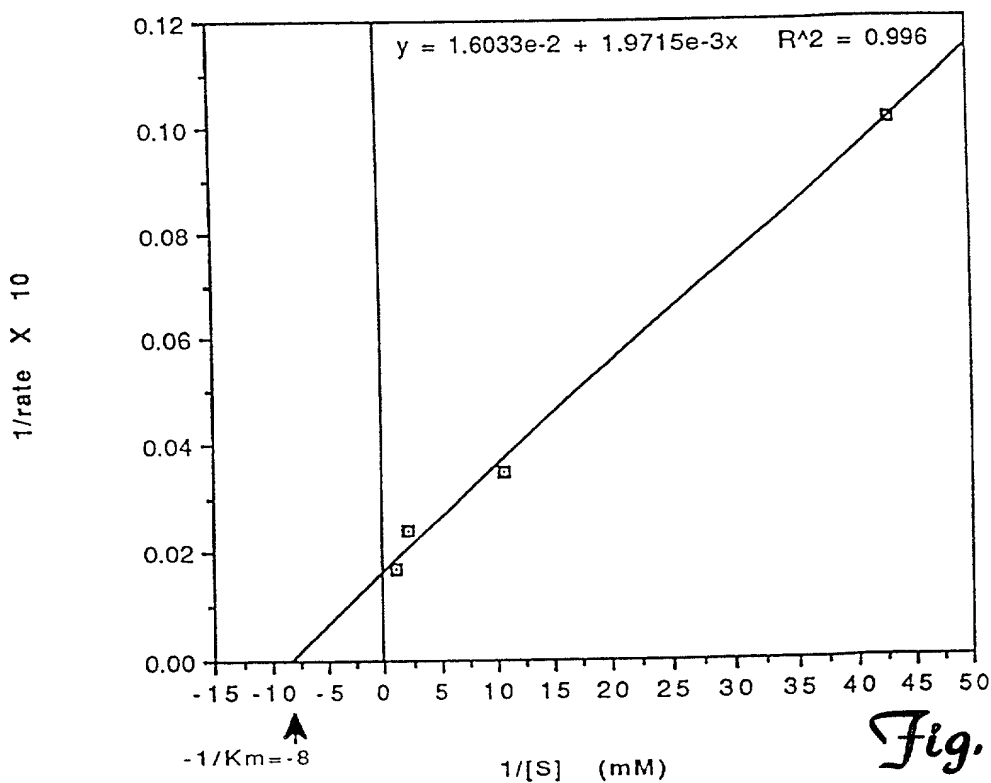Express Mail No.: EL776903336US   Sheet 6 of 7

6/7

Fig. 7

```
  1 MQTLSIQHGT LVTMDQYRRV LGDSWVHVQD GRIVALGVHA ESVPPPADRV
 51 IDARGKVVLP GFINAHTHVN QILLRGGPSH GRQFYDWLFN VVYPGQKAMR
101 PEDVAVAVRL YCAEAVRSGI TTINENADSA IYPGNIEAAM AVYGEVGVRV
151 VYARMFFDRM DGRIQGYVDA LKARSPQVEL CSIMEETAVA KDRITALSDQ
201 YHGTAGGRIS VWPAPATTTA VTVEGMRWAQ AFARDRAVMW TLHMAESDHD
251 ERIHGMSPAE YMECYGLLDE RLQVAHCVYF DRKDVRLLHR HNVKVASQVV
301 SNAYLGSGVA PVPEMVERGM AVGIGTDNGN SNDSANMIGD MKFMAHIHRA
351 VHRDADVLTP EKILEMATID GARSLGMDHE IGSIETGKRA DLILLDLRHL
401 RRLSHHLAAT IVFQAYGNEV DTVLIDGNVV MENRRLSFLP PERELAFLEE
451 AQSRATAILQ RANMVANPAW RSL
```

Rates for AtzA w/ atrazine

(A)

☐ m= rate
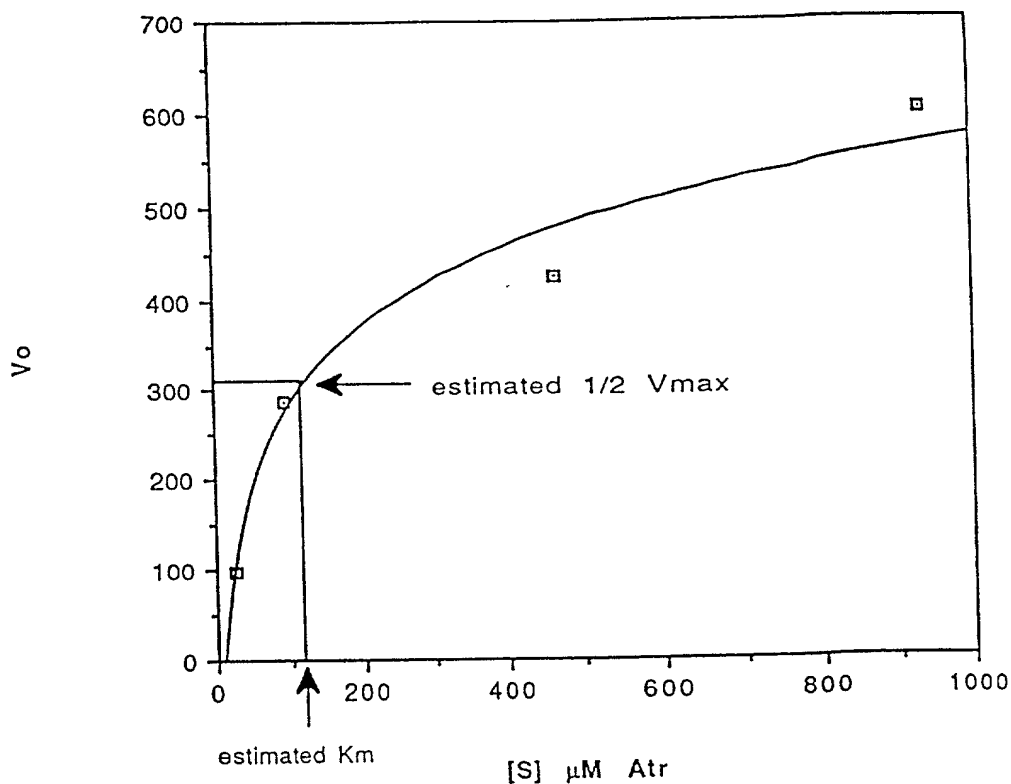
Lineweaver Burke plot
Km estimated to be 125 μM

(B)

☐ 1/rate X 10

Fig. 8